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## **AMENDMENTS TO THE CLAIMS**

1. (Currently amended) A light-emitting device, comprising:

a multi-layer stack of materials including a light-generating region, and a first layer that is n-doped and supported by the light-generating region, a surface of the first layer being configured so that light generated by the light-generating region can emerge from the light-emitting device via the surface of the first layer; and

a material in contact with the surface of the first layer, the material having an index of refraction less than about 1.35,

wherein the light emitting device is packaged.

- 2. (Original) The light-emitting device of claim 1, wherein the surface of the first layer has a dielectric function that varies spatially according to a pattern.
- 3. (Currently amended) The light-emitting device of claim 1, wherein the surface of the first layer has features holes with a size of less than about  $\lambda/5$ , where  $\lambda$  is a wavelength of light that can be emitted by the first layer.
- 4. (Previously Presented) The light-emitting device of claim 1, wherein the light-emitting device is in the form of a packaged die.
- 5. (Previously Presented) The light-emitting device of claim 1, wherein the material comprises a gas.
- 6. (Previously Presented) The light-emitting device of claim 5, wherein the gas comprises air.
- 7. (Currently amended) The light-emitting device of claim 5, wherein a pressure of the gas is less than about 100 Torr.

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8. (Currently amended) The light-emitting device of claim 1, wherein the material has an index

of refraction of at least about-one.

9. (Previously Presented) The light-emitting device of claim 1, wherein the packaged light-

emitting device is free of an encapsulant material.

10. (Currently amended) The light-emitting device of claim 1, further comprising a cover, the

material having an index of refraction of less than about 1.35 being between the cover and the

surface of the first layer.

11. (Previously Presented) The light-emitting device of claim 10, wherein the cover comprises a

phosphor material.

12. (Previously Presented) The light-emitting device of claim 11, wherein the cover is

configured so that light generated by the light-generating region that emerges via the surface of the

first layer can interact with the phosphor material, and so that light that emerges via the surface of

the first layer and interacts with the phosphor material emerges from the cover as substantially white

light.

13. (Currently amended) The light-emitting device of claim 1, further comprising:

a first sheet comprising a material that is substantially transparent to light that emerges from

the light-emitting device; and

a second sheet comprising a phosphor material, the second sheet being adjacent the first

sheet,

wherein the material having an index of refraction of less than about 1.35 is between the first

sheet and the surface of the first layer.

14. (Previously Presented) The light-emitting device of claim 13, the first and second sheets

being configured so that light generated by the light-generating region that emerges via the surface

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of the first layer can interact with the phosphor material, and so that light that emerges via the surface of the first layer and interacts with the phosphor material emerges from the second sheet as substantially white light.

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- (Previously Presented) The light-emitting device of claim 1, further comprising a support 15. that supports the multi-layer stack of materials.
- (Currently amended) The light-emitting device of claim 15, further comprising a layer of 16. reflective material that is capable of reflecting at least about-50% of light generated by the lightgenerating region that impinges on the layer of reflective material, the layer of reflective material being between the support and the multi-layer stack of materials.
- 17. (Previously Presented) The light-emitting device of claim 16, wherein the reflective material is a heat sink material.
- (Previously Presented) The light-emitting device of claim 17, wherein the heat sink material 18. is configured so that the heat sink material has a vertical heat gradient during use of the lightemitting device.
- (Previously Presented) The light-emitting device of claim 16, further comprising a heat sink 19. material disposed adjacent the support.
- (Previously Presented) The light-emitting device of claim 19, wherein the heat sink material 20. is configured so that the heat sink material has a vertical heat gradient during use of the lightemitting device.
- (Previously Presented) The light-emitting device of claim 1, further including a current-21. spreading layer between the first layer and the light-generating region.

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22. (Previously Presented) The light-emitting device of claim 1, further comprising electrical

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contacts configured to inject current into the light-emitting device.

23. (Previously Presented) The light-emitting device of claim 22, wherein the electrical contacts

are configured to vertically inject electrical current into the light-emitting device.

24. (Previously Presented) The light-emitting device of claim 1, wherein the light-emitting

device is selected from the group consisting of light-emitting diodes, lasers, optical amplifiers, and

combinations thereof.

25. (Previously Presented) The light-emitting device of claim 1, wherein the light-emitting

device comprises a light emitting diode.

26. (Previously Presented) The light-emitting device of claim 1, wherein the light-emitting

device is selected from the group consisting of OLEDs, flat surface-emitting LEDs, HBLEDs, and

combinations thereof.

27. (Previously Presented) The light-emitting device of claim 1, wherein the surface of the first

layer has a dielectric function that varies spatially according to a pattern with an ideal lattice

constant and a detuning parameter with a value greater than zero.

28. (Previously Presented) The light-emitting device of claim 1, wherein the surface of the first

layer has a dielectric function that varies spatially according to a pattern, and the pattern does not

extend into the light-generating region.

29. (Previously Presented) The light-emitting device of claim 1, wherein the surface of the first

layer has a dielectric function that varies spatially according to a pattern, and the pattern does not

extend beyond the first layer.

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30. (Previously Presented) The light-emitting device of claim 1, wherein the surface of the first

layer has a dielectric function that varies spatially according to a pattern, and the pattern extends

beyond the first layer.

31. (Currently amended) The light-emitting device of claim 1, further comprising a layer of

reflective material that is capable of reflecting at least about-50% of light generated by the light-

generating region that impinges on the layer of reflective material,

wherein the light-generating region is between the layer of reflective material and the first

layer.

32. (Cancelled)

33. (Previously Presented) The light-emitting device of claim 1, wherein the surface of the first

layer has a dielectric function that varies spatially according to a nonperiodic pattern.

34. (Previously Presented) The light-emitting device of claim 1, wherein the surface of the first

layer has a dielectric function that varies spatially according to a complex periodic pattern.

35. (Cancelled)

36. (New) The light-emitting device of claim 1, wherein the first layer is formed directly on the

light-generating region.

37. (New) The light-emitting device of claim 1, wherein the first layer has a thickness of less

than 10 microns.

38. (New) The light-emitting device of claim 1, wherein the material has an index of refraction

of less than 1.2.

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39. (New) The light-emitting device of claim 1, wherein the surface of the first layer is roughened.

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